

12 --A CTP-CP4 EPSPS fusion was constructed between the *Arabidopsis thaliana* EPSPS CTP (Klee *et al.*, 1987) and the CP4 EPSPS coding sequences. The *Arabidopsis* CTP was engineered by site-directed mutagenesis to place a *SphI* restriction site at the CTP processing site. This mutagenesis replaced the Glu-Lys at this location with Cyst-Met. The sequence of this CTP, designated as CTP2 (SEQ ID NO:10), is shown in Figure 9. The N-terminus of the CP4 EPSPS gene was modified to place a *SphI* site that spans the Met codon. The second codon was converted to one for leucine in this step also. This change is reflected in SEQ ID NO: 70. This change had no apparent effect on the in vivo activity of CP4 EPSPS in *E. coli* as judged by rate of complementation of the AroA allele. This modified N-terminus was then combined with the *SacI* C-terminus and cloned downstream of the CTP2 sequences. The CTP2-CP4 EPSPS fusion was cloned into pBlueScript KS (+). This vector may be transcribed in vitro using the T7 polymerase and the RNA translated with <sup>35</sup>S-Methionine to provide material that may be evaluated for import into chloroplasts isolated from *Lactuca sativa* using the methods described hereinafter (della-Cioppa *et al.*, 1986, 1987). This template was transcribed in vitro using T7 polymerase and the <sup>35</sup>S-Methionine-labeled CTP2-CP4 EPSPS material was shown to import into chloroplasts with an efficiency comparable to that for the control Petunia EPSPS (control = <sup>35</sup>S labeled PreEPSPS [pMON6140: della-Cioppa *et al.*, 1986]).--

At page 104, please replace the sequence listing by the substitute sequence listing attached herewith.

**IN THE CLAIMS**

Please amend claims 102-104, and 107 to read:

1 ~~102.~~ An antibody immunoreactive with a 5-enolpyruvylshikimate-3-phosphate synthase enzyme, wherein the enzyme comprises SEQ ID NO: 3 or SEQ ID NO: 70.

123 ~~103.~~ The antibody of claim ~~102~~<sup>1</sup>, further defined as a polyclonal antibody.  
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